WHAT IS CLAIMED IS:

1. A method of forming an electrochemical cell, the method comprising contacting a negative pole layer and a positive pole layer one with the other or with an optional layer interposed therebetween, said pole layers and said optional layer being selected so as to self-form an interfacial separator layer between said pole layers upon said contacting.

2. The method according to claim 1, wherein said pole layers and said optional layer are selected such that said electrochemical cell is sufficiently deliquescent for keeping said pole layers generally wet and sufficiently electroactive for obtaining ionic conductivity between said pole layers.

3. The method according to claim 1, wherein said interfacial separator layer comprises a polymer precipitate or a gel.

4. The method according to claim 1, wherein said interfacial separator layer self-forms via a physical interaction.

5. The method according to claim 4, wherein said physical interaction results in a formation of a polymer precipitate or a gel between said pole layers.

6. The method according to claim 1, wherein said interfacial separator layer self-forms via a chemical reaction.

7. The method according to claim 6, wherein said chemical reaction results in a formation of a polymer precipitate or a gel between said pole layers.

8. The method according to claim 1, wherein said interfacial separator layer self-forms via a physical interaction between at least one polymer and at least one polymer precipitating agent.

9. The method according to claim 1, wherein said interfacial separator layer self-forms via a physical interaction between at least one polymer and at least one electrostatic cross-linking agent.

10. The method according to claim 1, wherein said interfacial separator layer self-forms via a physical interaction between at least two polymers.

11. The method according to claim 10, wherein said physical interaction between said at least two polymers is selected from the group consisting of an electrostatic interaction and a non-electrostatic interaction.

12. The method according to claim 11, wherein said non-electrostatic interaction is selected from the group consisting of hydrogen bonding interaction and van-der-Waals interaction.

13. The method according to claim 1, wherein said interfacial separator layer self-forms via a physical interaction between at least two polymers and at least one activator.

14. The method according to claim 13, wherein said at least one activator is selected from the group consisting of zinc chloride and H_3O^+ ions.

15. The method according to claim 1, wherein said interfacial separator layer self-forms via a chemical reaction between at least one polymerizable unit and at least one polymerization activator.

16. The method according to claim 1, wherein at least one of said pole layers and said optional layer includes a material that is both deliquescent and electroactive.

17. The method according to claim 16, wherein said material includes zinc chloride.

18. The method according to claim 1, wherein said positive pole layer includes manganese dioxide powder and said negative pole layer includes zinc powder.

19. The method according to claim 18, wherein said negative pole layer further includes carbon powder.

20. The method according to claim 18, wherein said positive pole layer further includes carbon powder.

21. The method according to claim 8, wherein said at least one polymer includes poly(vinyl pyrrolidone) (PVP).

22. The method according to claim 8, wherein said at least one polymer precipitating agent includes zinc chloride.

23. The method according to claim 21, wherein said at least one polymer precipitating agent includes zinc chloride.

24. The method according to claim 8, wherein said at least one polymer includes at least one polysaccharide.

25. The method according to claim 24, wherein said at least one polymer precipitating agent includes zinc chloride.

26. The method according to claim 24, wherein said at least one polysaccharide includes chitosan.

27. The method according to claim 9, wherein said at least one polymer includes at least one polysaccharide.

28. The method according to claim 27, wherein said at least one polysaccharide includes at least one carboxylated polysaccharide.

29. The method according to claim 27, wherein said at least one polysaccharide includes sodium alginate.

30. The method according to claim 27, wherein said at least one polysaccharide includes pectin.

31. The method according to claim 9, wherein said at least one electrostatic cross-linking agent includes zinc chloride.

32. The method according to claim 27, wherein said at least one electrostatic cross-linking agent includes zinc chloride.

33. The method according to claim 10, wherein at least one of said at least two polymers is poly(acrylic acid).

34. The method according to claim 33, wherein at least one of said least two polymers is a polymer selected from the group consisting of PVP, poly(vinyl alcohol), poly(ethylene oxide) and poly(ethyl oxazoline) (PEOx).

35. The method according to claim 13, wherein at least one of said at least two polymers is selected from the group consisting of poly(acrylic acid) and partially neutralized poly(acrylic acid).

36. The method according to claim 35, wherein said at least one activator is selected from the group consisting of zinc chloride and H_3O^+ ions.

37. The method according to claim 1, and further comprising providing at least one terminal in electrical contact with at least one of said pole layers.

38. The method according to claim 37, and further comprising applying said terminals to the cell via a printing technology.

39. An electrochemical cell formed by the method of claim 1.

40. A method of forming an electrochemical cell, the method comprising

(a) printing a layer of positive pole powder onto a first substrate;

(b) printing a layer of electrolyte on said positive pole layer, wherein said electrolyte comprises a self-forming separator layer ingredient;

(c) printing a layer of negative pole powder onto a second substrate;

(d) printing a layer of electrolyte on said negative pole layer, wherein said electrolyte comprises a self-forming separator layer ingredient; and

(e) contacting said first substrate and said second substrate readily facilitating interaction between said self-forming separator layer ingredients in said positive pole layer and said negative pole layer to self form an interfacial separator layer between said negative pole layer and said positive pole layer.

41. The method of claim 40, further comprising the step of printing an ink prior to step (a) onto at least one of inner sides of first and second substrates, said ink being a current conductor.

42. A method of forming an electrochemical cell, the method comprising

(a) printing a layer of positive pole powder onto a first substrate;

(b) printing a layer of electrolyte on said positive pole layer, wherein said electrolyte comprises a self-forming separator layer ingredient;

(c) printing a layer of negative pole powder onto a second substrate;

(d) printing a layer of electrolyte on said negative pole layer, wherein said electrolyte comprises a self-forming separator layer ingredient; and

(e) contacting said first substrate and said second substrate with a thin layer interposed between said positive pole layer and said negative pole layer, wherein said thin layer comprises a self-forming separator layer ingredient, readily facilitating interaction between said self-forming separator layer ingredients in said positive pole layer and said negative pole layer with said self-forming separator layer ingredient in said thin layer to self-form an interfacial separator layer between said negative pole layer and said positive pole layer.

43. The method of claim 42, wherein said positive pole layer and said negative pole layer are applied simultaneously onto said thin layer.

44. The method of claim 43, wherein said application is by a printing technique.

45. An electrochemical cell comprising a negative pole layer, a positive pole layer and an interfacial separator layer interposed therebetween, said negative pole layer and said positive pole layer are selected so as to self-form said interfacial separator layer upon contacting one with the other or with an optional layer interposed therebetween.

46. The cell according to claim 45, wherein said pole layers and said optional layer are selected such that said electrochemical cell is sufficiently deliquescent for keeping said pole layers generally wet and sufficiently electroactive for obtaining ionic conductivity between said pole layers.

47. The cell according to claim 45, wherein said interfacial separator layer comprises a polymer precipitate or a gel.

48. The cell according to claim 45, wherein said interfacial separator layer self-forms via a physical interaction.

49. The cell according to claim 48, wherein said physical interaction results in a formation of a polymer precipitate or a gel between said pole layers.

50. The cell according to claim 45, wherein said interfacial separator layer self-forms via a chemical reaction.

51. The cell according to claim 50, wherein said chemical reaction results in a formation of a polymer precipitate or a gel between said pole layers.

52. The cell according to claim 45, wherein said interfacial separator layer self-forms via a physical interaction between at least one polymer and at least one polymer precipitating agent.

53. The cell according to claim 45, wherein said interfacial separator layer self-forms via a physical interaction between at least one polymer and at least one electrostatic cross-linking agent.

54. The cell according to claim 45, wherein said interfacial separator layer self-forms via a physical interaction between at least two polymers.

55. The cell according to claim 54, wherein said physical interaction between said at least two polymers is selected from the group consisting of an electrostatic interaction and a non-electrostatic interaction.

56. The cell according to claim 55, wherein said non-electrostatic interaction is selected from the group consisting of hydrogen bonding interaction and van-der-Waals interaction.

57. The cell according to claim 45, wherein said interfacial separator layer self-forms via a physical interaction between at least two polymers and at least one activator.

58. The cell according to claim 57, wherein said at least one activator is selected from the group consisting of zinc chloride and H_3O^+ ions.

59. The cell according to claim 45, wherein said interfacial separator layer self-forms via a chemical reaction between at least one polymerizable unit and at least one polymerization activator.

60. The cell according to claim 45, wherein at least one of said pole layers and said optional layer includes a material that is both deliquescent and electroactive.

61. The cell according to claim 60, wherein said material includes zinc chloride.

62. The cell according to claim 45, wherein said positive pole layer includes manganese dioxide powder and said negative pole layer includes zinc powder.

63. The cell according to claim 62, wherein said negative pole layer further includes carbon powder.

64. The cell according to claim 62, wherein said positive pole layer further includes carbon powder.

65. The cell according to claim 52, wherein said at least one polymer includes poly(vinyl pyrrolidone) (PVP).

66. The cell according to claim 52, wherein said at least one polymer precipitating agent includes zinc chloride.

67. The cell according to claim 65, wherein said at least one polymer precipitating agent includes zinc chloride.

68. The cell according to claim 52, wherein said at least one polymer includes at least one polysaccharide.

69. The cell according to claim 68, wherein said at least one polymer precipitating agent includes zinc chloride.

70. The cell according to claim 68, wherein said at least one polysaccharide includes chitosan.

71. The cell according to claim 53, wherein said at least one polymer includes at least one polysaccharide.

72. The cell according to claim 71, wherein said at least one polysaccharide includes at least one carboxylated polysaccharide.

73. The cell according to claim 71, wherein said at least one polysaccharide includes sodium alginate.

74. The cell according to claim 71, wherein said at least one polysaccharide includes pectin.

75. The cell according to claim 53, wherein said at least one electrostatic cross-linking agent includes zinc chloride.

76. The cell according to claim 71, wherein said at least one electrostatic cross-linking agent includes zinc chloride.

77. The cell according to claim 54, wherein at least one of said at least two polymers is poly(acrylic acid).

78. The cell according to claim 77, wherein at least one of said least two polymers is a polymer selected from the group consisting of PVP, poly(vinyl alcohol), poly(ethylene oxide) and poly(ethyl oxazoline) (PEOx).

79. The cell according to claim 57, wherein at least one of said at least two polymers is selected from the group consisting of poly(acrylic acid) and partially neutralized poly(acrylic acid).

80. The cell according to claim 79, wherein said at least one activator is selected from the group consisting of zinc chloride and H_3O^+ ions.

81. The cell according to claim 45, and further comprising at least one terminal in electrical contact with at least one of said pole layers.